

CLAIMS

I claim:

1. An automated bottle opener comprising:

a casing with a receiving area to receive a bottle,

a plunger assembly to apply downward pressure on a top of a bottle cap of said bottle, and

a rotator assembly to rotate said bottle cap; wherein

said casing comprises a means to secure a bottom of said bottle, and

said rotator assembly comprises a means to secure said top of said bottle cap;

such that

during an opening process initiated by a user moving a selector in a first direction,

a body of said bottle is prevented from rotating, and said rotator assembly rotates said bottle cap while said plunger assembly simultaneously applies pressure to said top of said bottle cap, thereby removing said bottle cap from said bottle, and

during a closing process, a direction of rotation of said rotator assembly is reversed by moving said selector in a second direction, such that said bottle cap is replaced onto said bottle.

2. The bottle opener as defined in claim 1 wherein:

motive power is supplied to said bottle opener by an electric motor in communication with said plunger assembly by means of a gear drive.

1 3. The bottle opener as defined in claim 2 wherein:
2 said plunger assembly comprises a means to prevent said plunger from rotating
3 relative to said casing.

1 4. The bottle opener as defined in claim 1 wherein:
2 said plunger assembly comprises a means to prevent said plunger from rotating
3 relative to said casing.

1 5. The bottle opener as defined in claim 1 wherein:
2 when said plunger assembly reaches limit of a downward travel path, a central
3 shaft is pushed upward, and when upward pressure overcomes an overload spring, a
4 reverse switch is triggered, thereby reversing direction of rotation of said rotator
5 assembly.

1 6. The bottle opener as defined in claim 1 wherein:
2 said rotator assembly comprises a rotator body with a pair of V-shaped cutouts
3 therein; and

4 tracking elements of said plunger assembly traverse said V-shaped cutouts to
5 define a stroke of said plunger, said tracking elements causing upward pressure on a
6 drive shaft of said plunger assembly when said tracking elements reach a bottom of said
7 V-shaped cutouts.

1 7. The bottle opener as defined in claim 1 wherein:

2 said plunger assembly is in communication with said rotator assembly through a
3 rotator spring, such that said rotator spring is compressed after an upper gripping
4 surface of said rotator contacts a top surface of said bottle cap, thereby enabling said
5 plunger to continue to exert downward pressure on said bottle cap while said rotator
6 assembly rotates said bottle cap.